

Wireless electro-installation

Smart home & building solutions



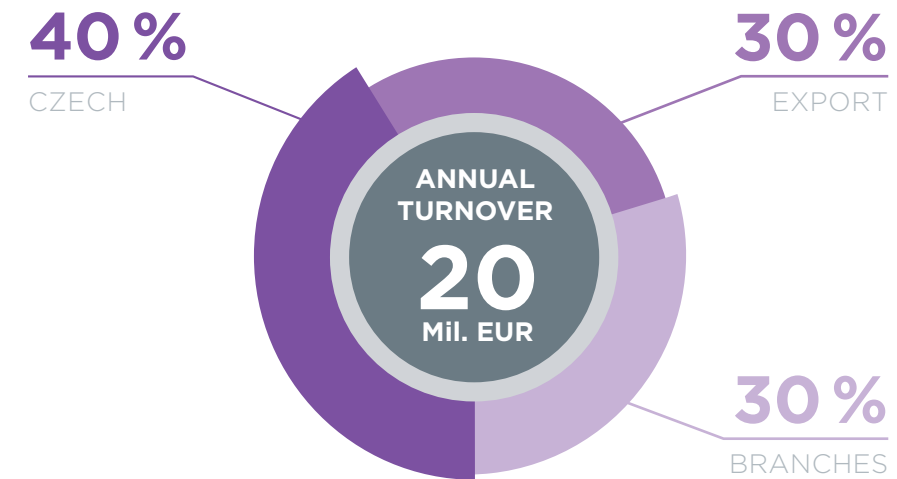
ELKO EP, Holding

The company ELKO EP has been one of the leading European players in the field of residential and industrial electrical devices for more than 25 years. Since 2007, the company has been developing and producing its own system of Smart Home & Building Solutions called iNELS.

At present, ELKO EP employs nearly 240 people, exports to 70 countries around the world and already has 16 foreign branches. The company is justly proud to produce its own components, and to have its own development and innovation of new products. It is also able to offer its customers instantaneous distribution and rapid, flawless service. The company became the Company of the Year in 2012 and earned its place as one of the TOP 100 Czech companies.



Facts and Stats



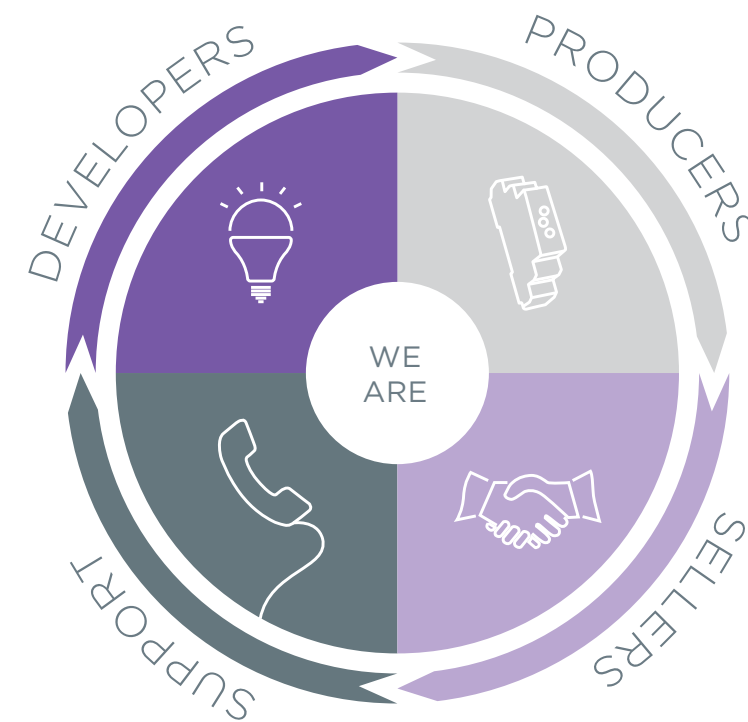
16
BRANCHES
OVER THE WORLD

70
EXPORTING
COUNTRIES

240
EMPLOYEES

5 000
iNELS INSTALLATION

12 000 000
MANUFACTURED PRODUCTS



www.inels.com

Why a Smart Home?

A Smart Home is not a necessity of life, but is becoming a vital requirement. It can do what a classic electrical installation cannot, or can only do with great difficulty.

Each potential customer has different motivations for wanting to set up a smart home. Some are interested in savings, others like combining comfort with safety, but in either case, all the characteristics are an inseparable part of the system, and it is only up to the customer which ones are most important.

The main advantage of iNELS RF is it performs wirelessly. This means that you do not need to carry out extensive alterations to your electrical installations to promote them to a higher order of magnitude.

So you can indulge what was not possible before. In addition, the electronic installation can be extended, changed or upgraded at any time.



Savings

- by efficient heating or AC regulation, you can attain savings of up to 30 %
- dimming lets you save around 15 %
- further savings: linking appliances, time switching, weekly mode, detectors

Safety

- the system includes detectors of motion, smoke and open windows
- you can create an alarm to protect your property and loved ones

Comfort

- you can control comfortably from a controller in the pocket or smartphone
- by pressing a single button, you perform several commands at once
- you need not worry about switching things off - they switch automatically or based on fulfilling a condition

Monitoring

- integrated video cameras provide a view of what is happening at a location you are currently away from
- events are recorded onto a log that you can view later
- you can connect from anywhere in the world and monitor your home in real time or from the recording

Automation

- everything is set up to function automatically
- weekly heating mode, blinds at dawn, lights at dusk
- the motion detector is not only for security, but detects the presence of persons for other functions as well

Flexibility

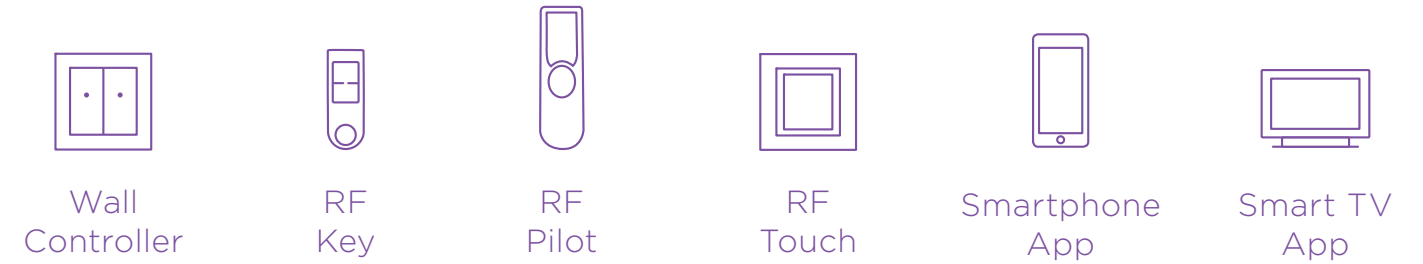
- option of adding more devices
- change in functions by simple readjustment
- settings and management remotely without needing to arrive on site

You can control your devices in various ways

It does not matter what you control, but how and how easily you control it. With us you can control the devices and appliances in many ways, one at a time or combine them at will.

For those conservatives amongst us, there are buttons in the form of switches exactly as we know and are used to them, for those of us who often move around the house in the garden, the RF Pilot remote control in your pocket will surely be appreciated. Touch unit is again designed for those who like everything in one place with a - 3.5 "display securely holding all the necessary buttons within the frame. An interesting and often preferred option is the driver's smart phone - which most of us already have in our pocket.

You can control iNELS with:



Wall controller

- wireless and in premium design
- the high variability of wireless switches
- simple installation - can be attached or fixed anywhere
- it also offers control of up to any 4 lights

Key chain

- pocket controller for every day
- small dimensions make it possible to have the key fob always handy
- it can control up to 4 independent devices and switch scenes

RF Pilot

- here marks the start of home automation
- the remote controller with OLED color display offers control of up to 40 household appliances
- lights, sockets, garage doors, sprinklers, blinds, awnings, etc.

RF Touch

- design element with a tinge of luxury fittingly accenting any interior
- it will become a central, wireless intuitively controlled home
- colored 3.5" TFT display

Smartphone

- the only controller that comes free
- one of the main thoughts behind the iNELS is to keep one's home under control
- after downloading the application, you can control the entire house

Smart TV

- by Samsung Smart TV from model 2013 iNELS RF via Smart RF Box
- you can add to the app a floorplan of your room and house for easier control
- installing and using the app iNELS Home control from Samsung sites is free

Your home

The wireless iNELS RF system offers you a unique chance to breathe life into your home.

Controlling appliances, dimming lights, creating light scenes, security - we need all these functions in our daily lives. iNELS RF is a building kit that you build just the way you like. The result will be one system that takes complete care of the running of your home. It will become an indispensable part of your family. You can fully adjust iNELS based on what you do or where you are, whether on vacation or at work, with family at home or with friends, or whether you are waking up or going to sleep.



APPS for your home

Through an application on your smartphone, you can control your home while keeping complete track of all its ongoing processes.





Living room

This is the room where not only family, but friends and guests meet. It is usually the home's largest room, and all technologies and multiple lights are installed here. You also may spend the majority of your time here.

With the press of a single button, iNELS lets you set up a light scene to suit the current situation or mood. The control touch unit puts the entire home virtually under your thumb - switch off all the lights, close the gate, read the outside temperature and set the thermostat in the children's room.



RF Touch
 Wireless touch unit for central control of your home wireless system. Besides switching and dimming, it provides a current overview of energy consumption and is a part of the home intercom. The color 4" TFT display enables quick and easy control of appliances.

Kitchen

The kitchen is a room with a large number of appliances. These include the stove, the dishwasher, the hood and the refrigerator. It is therefore natural to protect this area. This is accomplished either by a surge monitor in the distribution box or by detectors.

The smoke detector monitors a sudden fire or flare-up. The flame detector is the foundation of safety in your home. Battery power makes installation easy. The integrated temperature sensor scans for the critical temperature at which materials not producing smoke can ignite. The unique, stylish design is appropriate in every modern interior.



Smoke detector

This detector helps protect persons and property from a fire that has ignited. After detection, it immediately sends this information to your smartphone. The warning can be in the form of notification in the application. It also triggers an audible alarm.





Bedroom





You control the lighting and blinds with a switch on the nightstand.

With a long press, you set the brightness to your desired intensity, and keep one button reserved to light the way to the bathroom at night. With one practical button, you can also switch off all lights, even the forgotten ones (master switch).

The color LED lamp or color LED strip will provide a wonderful bedroom atmosphere to suit your mood.



Button for „GOOD NIGHT “

-  • Set romantic light scenes.
-  • Master switch (All OFF)
-  • Night light corridor to toilet.
-  • Gradual dimming off.

Children's room

Ideal when they're playing, being good and safe. The wireless button grows with the children.

For the older and more resourceful kids, the RF Pilot is ready. It can not only play with the colors of the colored LED lamps and strips, but can also control everything else in your home.

In the meantime, a video camera is monitoring the toddler in the crib and a night light chases away bad dreams - a lamp set by a dimmer to minimum brightness.



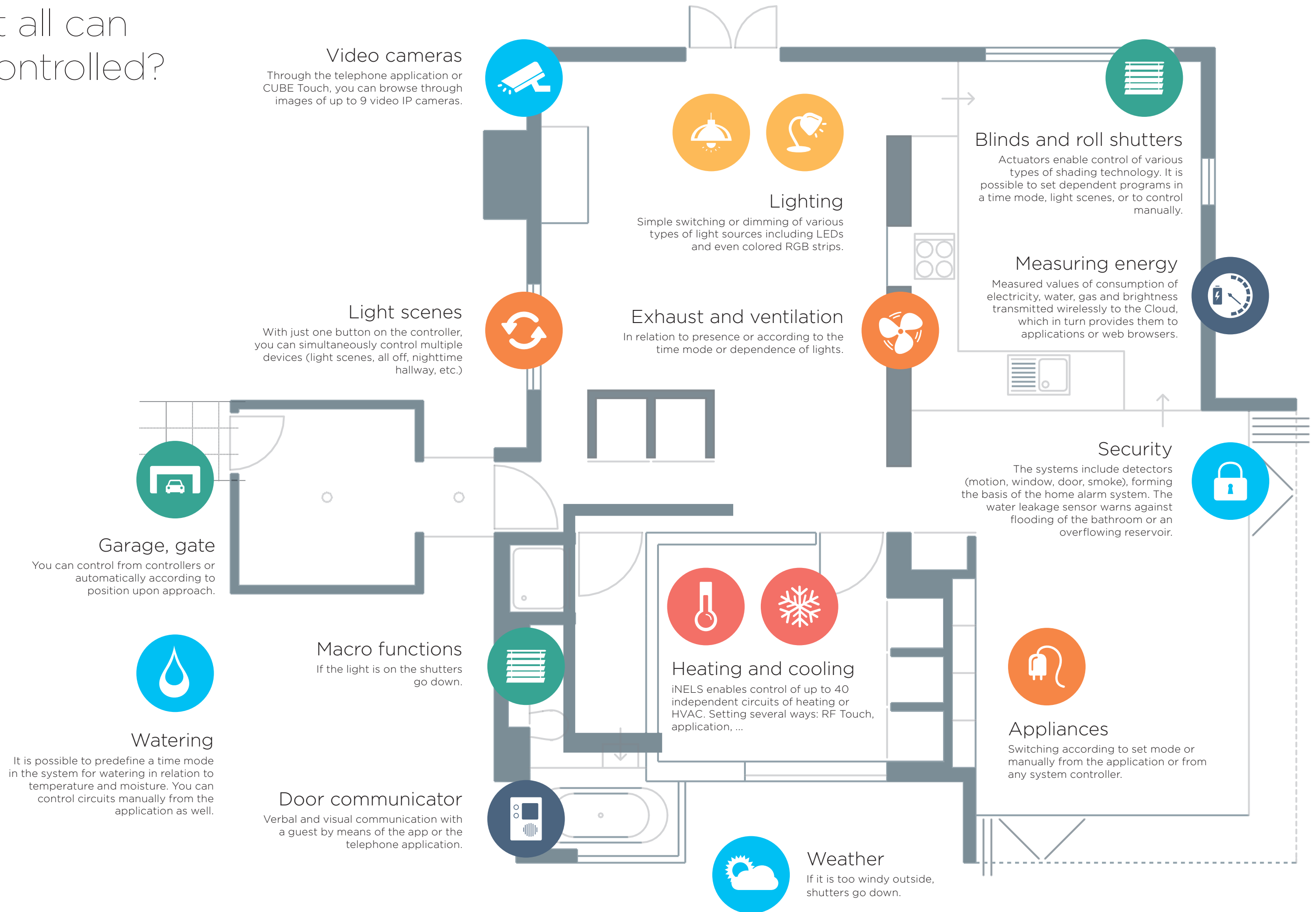
Camera Preview



Remote Controller/Keychain



What all can be controlled?



Temperature regulation

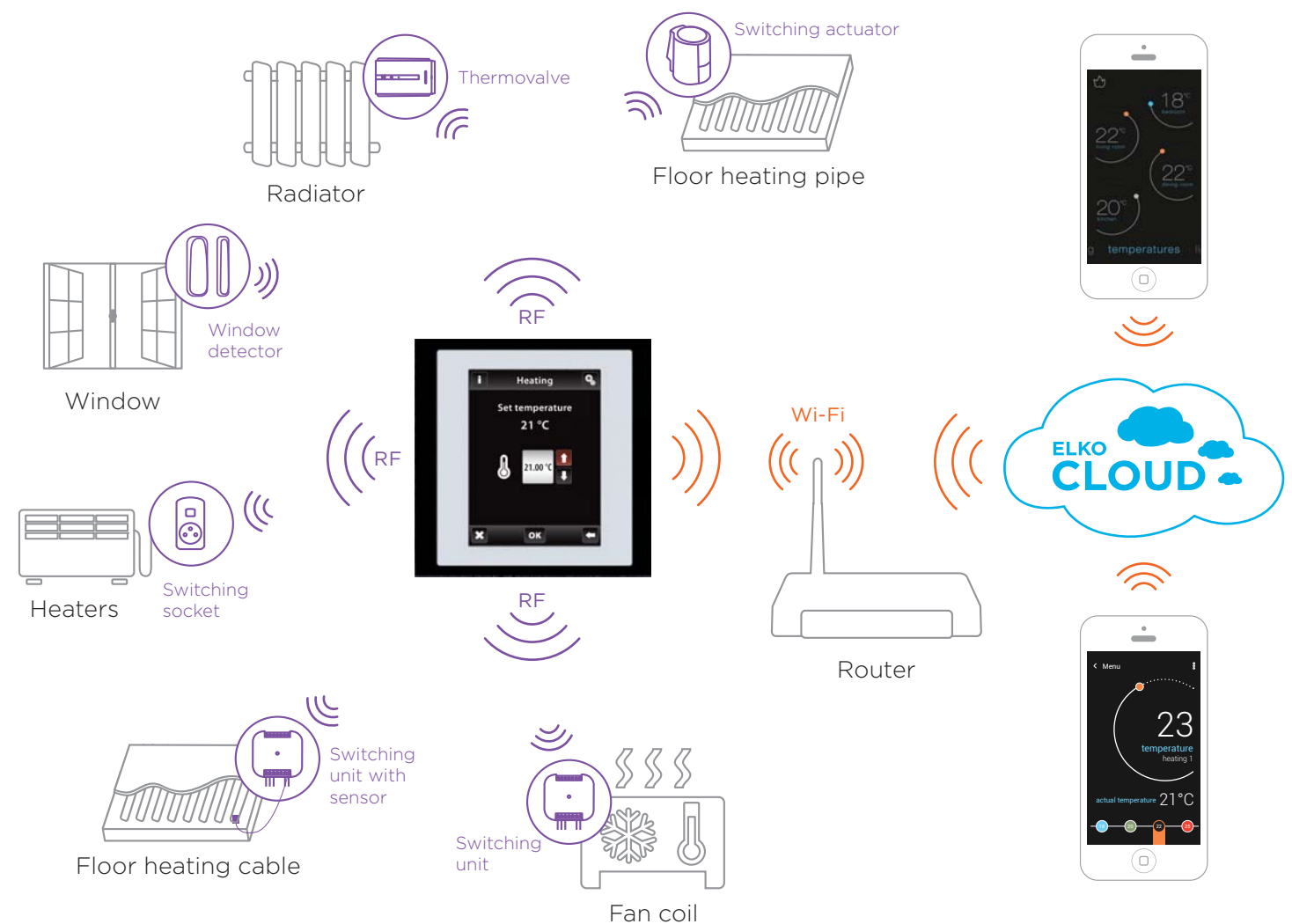
Heat regulation - with RF Touch, you have heating under control throughout the home.

It is not necessary to have a thermostat in each room, and yet you can regulate each room separately. Whether you are controlling a radiator-mounted thermovalve or floor-mounted electrical cable, this element always has a temperature sensor that sends information to RF Touch, which then regulates the home based on the set temperature and according to a time program.



RF Touch

- this is a touch wireless unit with a 3.5" display
- can control up to 40 heating or AC circuits = 40 thermostats in 1 device
- in connection with other wireless units, it can react to an open window or outdoor light intensity
- if the thermostat is connected to the Internet, it sends temperature information via the Cloud, and you can set the temperature from anywhere using a mobile application





Temperature controller

RFTC-50/G

- used for autonomous temperature control for underfloor pipes and auxiliary heating
- the display features information on the current and set temperature and heating parameters
- weekly program

Heating, ventilation & air-conditioning

The iNELS can control various heating sources - water, gas and oil boilers and regulate radiators, spiral heaters, fan coil units or electrical cables.

Using a wireless sensor, it can sense not only the outdoor, but also the indoor or floor temperature. Control is possible from RF Touch, a mobile application or by Temperature controller.



Temperature controller

RFSTI-11B

- the ideal solution for underfloor electrical (hot water) heating, where the external sensor senses the floor temperature, and a unit directly switches the heating mat (cables)
- the automatic program with manual regulation is performed via the unit RF Touch or the application iNELS Home Control



Temperature sensor

RFTI-10B

- measures the indoor (internal) and outdoor (external) temperature
- it sends the measured temperature to RF Touch or to a Smart RF Box
- temperature range -20 to 50 °C (-4 to 122 °F)
- battery power allows placement anywhere, sensors from TC/TZ line



Thermostatic radiator valve

RFATV-1

- measures the ambient temperature that it then compares with the set temperature in RF Touch or in the App
- based on regulation, it controls water valves in radiators and heating ladder
- temperature range 0–32 °C (32–90 °F)

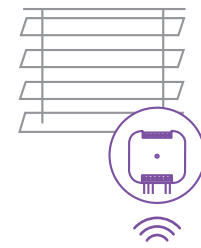
Shading controls, door, gates, jalousies, blinds, roll shutters...

Controlling garage doors, entrance gates, barriers, blinds, roll shutters, awnings - all of these can be controlled from a single controller - either a key alarm, RF Pilot or smartphone app.

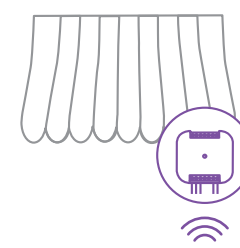
The main advantage of integration with the iNELS system is the option of presetting light scenes. In practice, this could mean closing the blinds at a set time or pulling down roll shutters in the event of bad weather - automatically, based on information from the weather station or manually. Whether you're at home or away. Another advantage to controlling light scenes is grouping multiple blinds together and controlling them with a single button or a single command. The pinnacle of use is rotating the lamellas of the blinds based on outdoor light intensity or sunset/sunrise. Yes, iNELS can do this too.



Blinds/Shutters



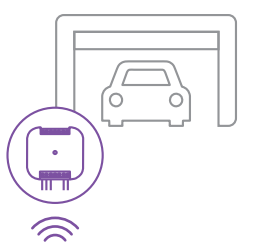
Awning



Access gateway



Garage



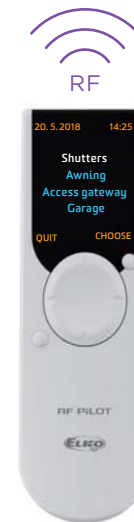
Flush mounted -shutter unit

RFJA-12B

- the shutters unit is used to control garage doors, gates, blinds, awnings, etc.
- load up to 2 x 8 A
- integrated time-functions



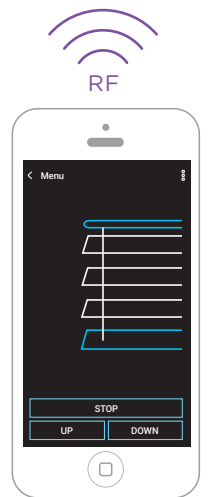
Keychain



RF Pilot



Wireless touch unit
RF Touch



App

Intercom & Video door-phone

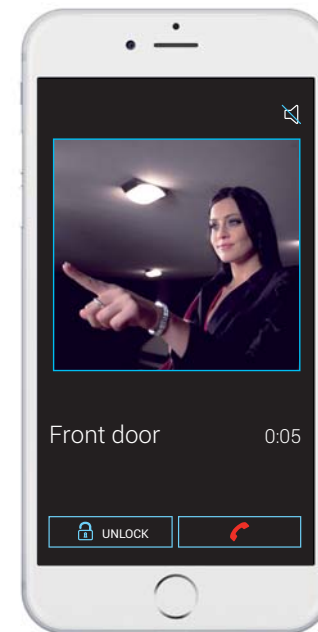
Intercom function allows communication between RF Touch units or intercom calls between these units and smartphones or tablets.

You can also receive audio/video transmission from the front door communicator through the intercom and you can see and speak with visitors even if you are not at home. It is a comfortable replacement of traditional doorbells or door phones. It is a wireless installation allowing a user to open the door or gate.

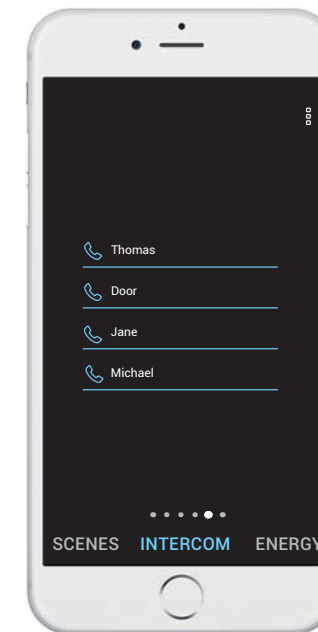


Door Communicator

- enables communication with voice- and video equipment in the facility: LARA, phone applications, tablet or TV - where individual devices can be combined
- videophone basic module can be extended with additional modules (for residential houses or buildings).
- the only connection required is a LAN cable that also supplies power (PoE)



iNELS enables you to redirect a door bell ringing and consequent video conversation to your phone, even if you are not at home.



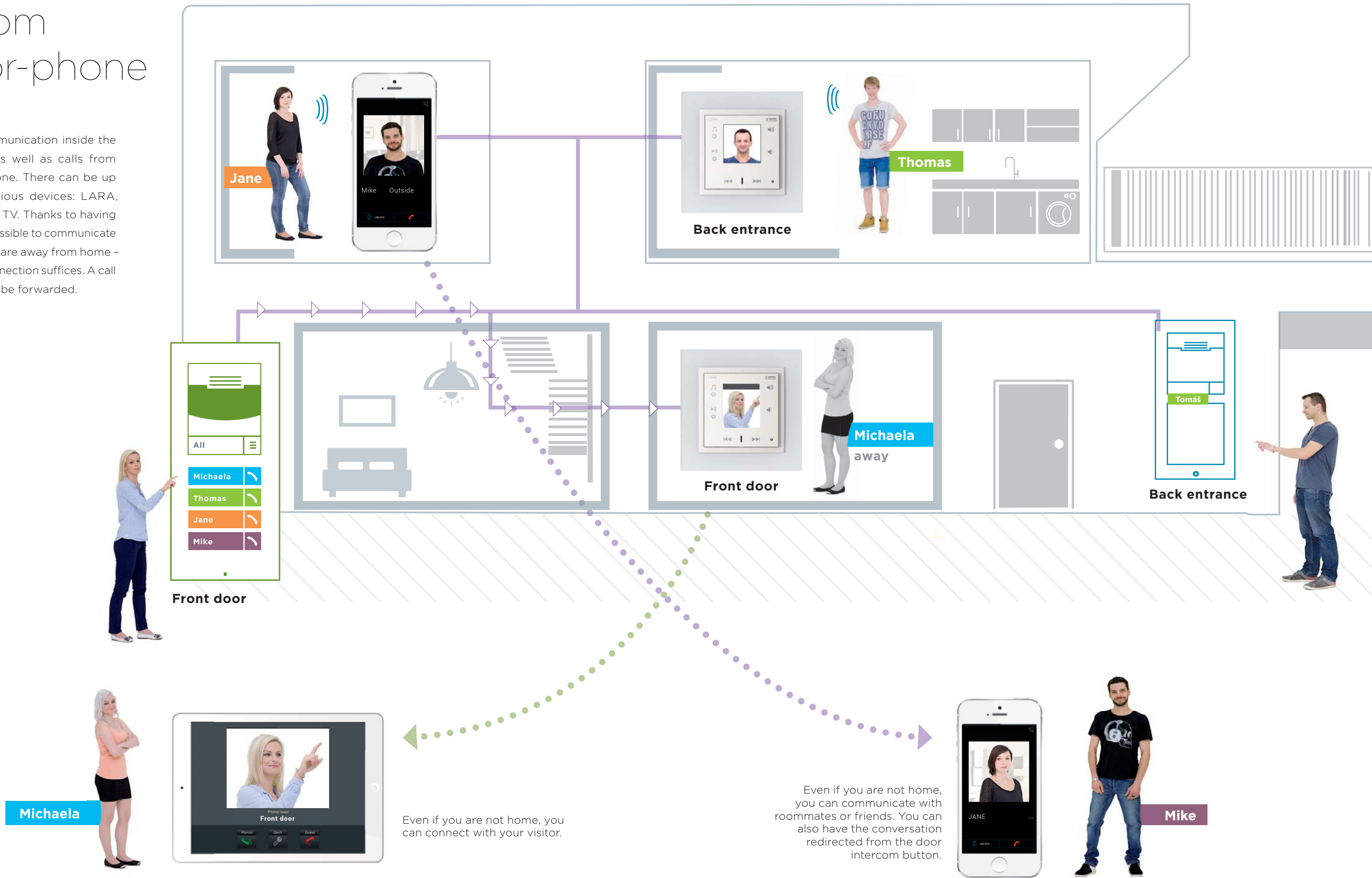
The application enables calls between participants on smartphones, tablets, IMM or LARA device.



Besides playing your music or the radio, the LARA unit can also facilitate a video conversation with the door communicator, the home intercom system or calls to the application in your mobile phone.

Intercom & Door-phone

iNELS enables communication inside the home (Intercom) as well as calls from the Video door-phone. There can be up to 30 users on various devices: LARA, Smartphone, Tablet, TV. Thanks to having its own server, it is possible to communicate (for free) even if you are away from home – a simple Internet connection suffices. A call at the door can also be forwarded.





Smoke detector

RFSD-100

- it detects smoke from a fire
- automatic testing
- integrated temperature sensor
- battery status indicator
- battery power



Motion detector

RFMD-100

- it detects movement of persons and automatically controls lighting
- infrared scanning method to prevent false alarms
- battery power



Window detector

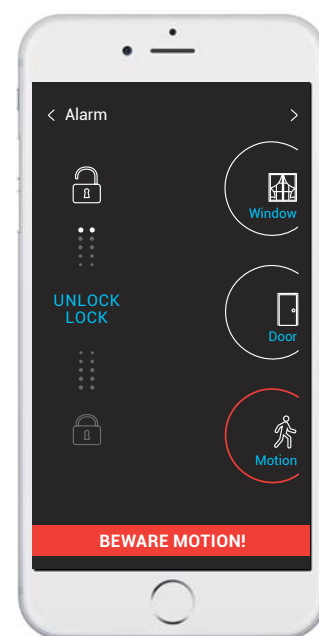
RFWD-100

- it informs you as you are leaving that a window or door is open
- upon activation, it sends information to the unit or Application
- integrated temperature sensor
- battery power

Security & Safety

Security of residents and protection of property are top priorities. For this reason, iNELS provides detectors that sense smoke, motion or open windows or doors.

Thanks to iNELS, you can set up basic security for your home, which, if breached, sends a notification in the application or via SMS. The flood sensor detects and indicates leaking water or an overflowing washing machine; after assessing the problem, you can thaw out a frozen gutter or remove icicles. You can connect some video cameras in the application that monitor internal or exterior movement.



Flood detector

RFSF-1B + FP-1

- it detects flooding or overflowing by means of an external probe FP-1
- when activated, it sends a signal to the app or RF Touch to the switching units for closing the water pipe



iNELS Cam

iNELS Cam

- up to 10 video cameras can be connected in the Application
- LAN or Wi-Fi connection
- 640 x 480 px resolution
- night IR illumination
- power adapter: 5V/1A (part of supply)



Video cameras

- you can connect any video camera supporting MJPEG2
- in the application, you can zoom in, zoom out and rotate if the video camera allows it

Energy management

Due to ever-rising energy costs, monitoring energy consumption is one of the most important aspects of a smart home.

Wireless sensors are installed directly to the water meter or gas meter and by means of a concentrator at the electric meter, and information is sent to the Cloud for further processing. Data may be browsed through various filters in the Apps or Web browser.

It is also possible to set up notifications when critical parameter settings are exceeded and to switch on/off a certain device. Connecting to Smart Grid intelligent networks enables efficient electricity usage at optimal times.



Energy gateway

RFPM-2M

- the energy gateway is a central device for assessing energy consumption (electricity, water, gas)
- it acts as an interface between the pulse converter RFTM-1 and your smartphone
- connection to the data network is made by means of a LAN Ethernet connector or wirelessly via a Wi-Fi network
- monitored data is stored on internal memory storage
- by means of the application iHC and Cloud connection, it is possible to maintain online access to data and monitoring history
- up to 4 tariff meter readings of electricity consumption



Current transformer

CT50

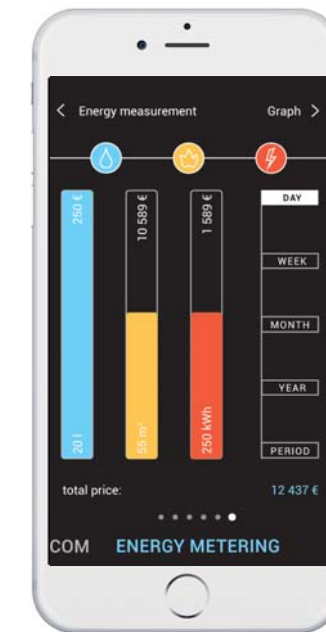
- opening pliers open/close on the existing wire of the measured circuit, most frequently at the main supply at the electricity meter
- it is connected to the energy gateway RFPM-2M (up to 3 CT)



Transmitter pulses

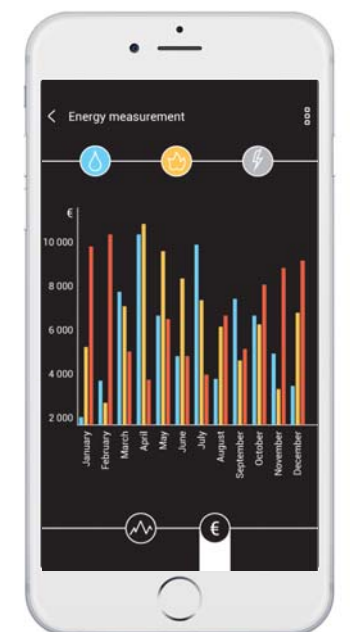
RFTM-1

- wireless transmitter of pulses from meter-based sensors
- it sends these pulses to the gateway RFPM-2M for further processing
- supported sensors: LS (LED sensor), MS (magnetic sensor), IRS (IR sensor)



Consumption overview

- all energy sources for the selected period
- comparison with previous period
- critical limits from previous values



History in a graph

- possible to display based on units or value
- time restriction: day, week, month or selected period

Dimming & Lighting control

Dimming is one of the basic characteristics of a smart home. Dimmers not only render a pleasant atmosphere, but also save on electricity.

iNELS offers dimmers in various designs (box, flush, DIN rail mounted, socket) for all types of light sources including today's popular LEDs.

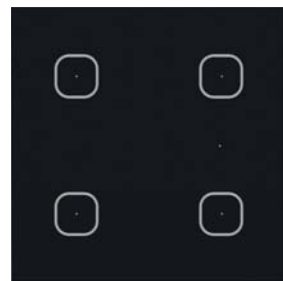
Color strips and lamps have become a modern trend used not only for decorative illumination, but also more and more for lighting in the workplace. These too are integrated in iNELS.



RGB LED bulb White LED bulb

RF-RGB-LED-550 WHITE-LED-675

- receiver and dimmer enable setting of the brightness and color
- luminance: 550 lm/675 lm, Base: E27
- lamp life: 30,000 hours
- function: brightness 0–100%, RGB lamp: automatic blending of colors. White lamp: setting colors warm/cold white



Wireless Dimmer Switch

RFDW-71

- wireless switch in glass design with integrated dimming element
- supply voltage: 230V AC/50 Hz, 120V AC/60 Hz
- 4-channel design
- control up to 25 channels
- 6 light functions



Twilight switch (outdoor mounted)

RFSOU-1

- the wireless twilight switch measures outside illumination intensity
- based on a set value, it controls the switching element
- elimination of short-term change of ambient lighting (glare)
- battery power



Dimmer for RGB LED strips

RFDA-73M/RGB

- dimmer for controlling 3 single-color strips or an RGB color strip
- control from the RF Key Alarm, RF Pilot, RF Touch or the Application
- inputs for controlling 0–10 V
- maximum load: 3x 5 A



Universal dimmer (DIN rail mounted)

RFDEL-71M

- designed for dimming various light sources 230 V (600 VA), 120 V (300 VA)
- type of load: R, L, C, ESL, LED
- smooth dimming or brightening
- setting min. brightness for eliminated flashing LED sources



Universal dimmer (flush mounted)

RFDEL-71B

- designed for dimming various light sources 230 V (160 VA), 120 V (80 VA)
- type of load: R, L, C, ESL, LED
- smooth dimming or brightening
- setting min. brightness for eliminated flashing LED sources

Appliance control

It is possible to switch a multitude of electrical devices and appliances.

Whether they are connected to a socket or, installation box or hard-wired, iNELS has the right switch design for them.

Switching actuators are not only used for switching appliances but also allow you to set dependent functions – time-dependent or functions depending on the value of other input – motion detectors, flood sensors, light sensors or door opening detectors.



Switching socket

RFSC-61

- switched socket for controlling fans, lamps, heaters and other devices connectible by cable with plug
- time-functions up to 10 hours



Switch unit

RFSA-61M

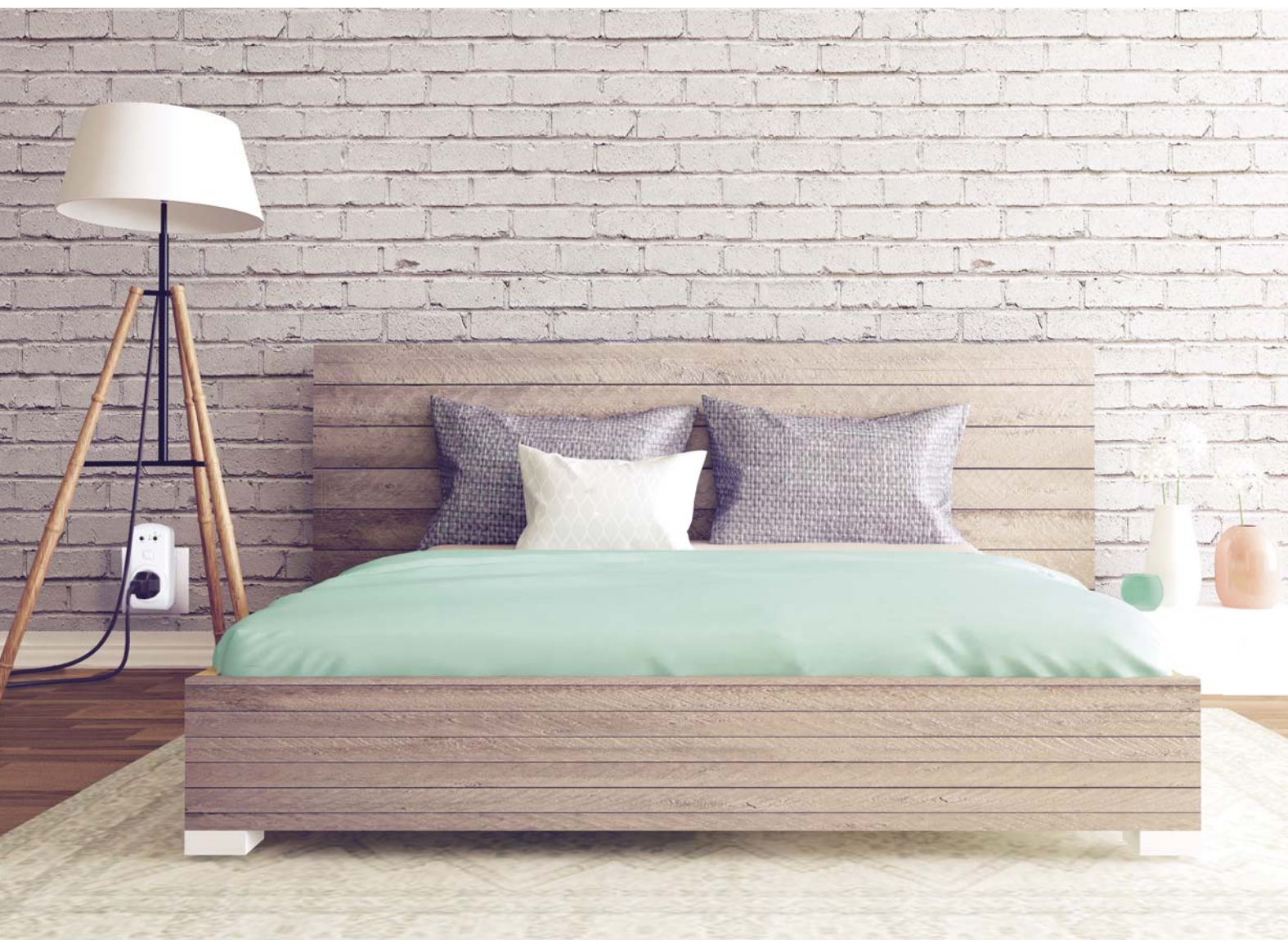
- the switching unit is used for controlling appliances, sockets, lights or ventilation
- can be combined with detectors



Switch unit - 6 outputs

RFSA-66M

- the switching unit can switch up to 6 independent circuits (socket, light)
- integrated time-functions for each channel separately.



Switch unit

RFSAI-61B

- the switching unit with 1 output channel is used for controlling appliances and lights
- integrated time-functions up to 60 min.
- terminal for connection existing push button switch



Switch unit - 2 outputs

RFSA-62B

- the switching unit with 2 output channels is used for controlling appliances and light circuits
- integrated time-functions up to 60 min.

How you will control it?

The system can be controlled in a wide variety of ways. These include buttons the size of a classic switch, which control four various devices or functions. A button can be attached, glued or simply placed somewhere.

The wireless key alarm makes for a suitable pocket controller of gates, garage doors or entrance ways.

RF Pilot with its OLED color displays serves as a basis for home automation. It can control up to 40 devices, which can be located in individual rooms.



DESIGN LOGUS⁹⁰



Wall switch

RFWB-20/G, RFWB-40/G

- controls 2/4 appliances independently
- light scenes function
- battery power
- design: plastic, glass, wood, metal, stone, ...
- flat base
- silent operation



We bring you switches, sockets and accessories in standard, plastic or metallic design, but you will be impressed most by enchanting luxury design of purely natural frames: real wood, metal, granite and tempered glass - crystal.



RF Touch

RF Touch - W

- system unit, which controls your smart home
- controls up to 40 units
- thanks to bi-directional communication, it displays the status of appliances
- it is connected to the home network by LAN cable or via Wi-Fi



Multi with display

RF Pilot

- controls up to 40 appliances independently
- scenes function
- integrated temperature sensor
- battery power
- colored OLED display



Keychain

RF Key

- controls 4 appliances independently
- light scenes function
- battery power
- design: white, black

Behind the scenes

Smart Boxes are important but invisible elements in the smart home system. They are used to interface with a controlling telephone through its application. They are connected to the network, and if remote control is necessary, also to the Internet.

The Smart Box also acts as a mediator for storing data in the Cloud. Signal repeater – the repeater is used to extend the range where it is necessary to control devices over a greater distance.

New, now you can also use as signal repeaters other units in our portfolio, such as the switching, dimming components that use the protocol RFIO².



Smart RF Box (HUB)

eLAN-RF-003
eLAN-RF-003-Wi

- smart RF box is center of your Smart Home and bridge between your smartphone and controlled appliances
- thanks to the two-way communication, it visualizes the current status of individual units/actuators
- controls up to 40 units
- the intuitive app iNELS Home Control provides a centralized control from one place
- you can connect the HUB via LAN or Wi-Fi

Repeater

RFRP-20

- used to increase the range between the unit and controller by up to 200 m (220 yd)
- can read up to 20 units
- the socket function remains unchanged

iNELS Wireless System

RF - radiofrequency protocol

Wi-Fi

Outdoor PTZ camera



Wi-Fi

Weather station



Indoor PTZ camera



Wi-Fi

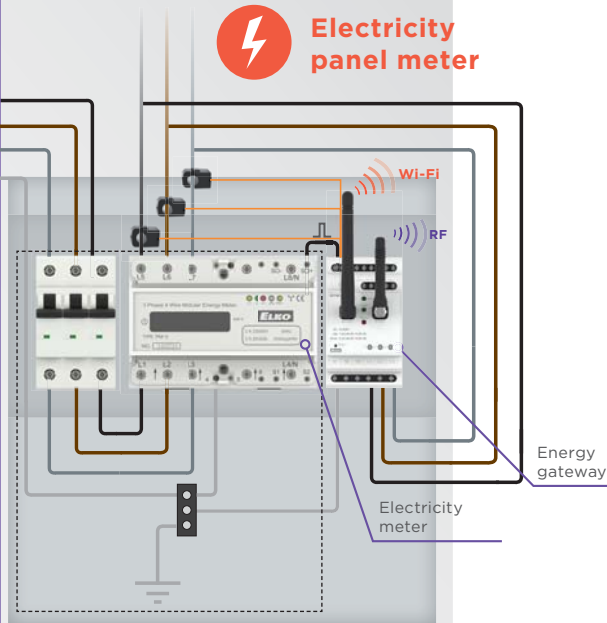
Indoor camera



Wi-Fi



Electricity panel meter



Wi-Fi Router



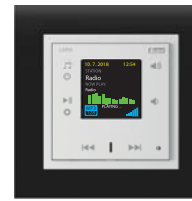
Smart IR Box

Controllers:

Application for the smart phone



Radio & Intercom



Touch unit



Wall controller



Thermostat



Wireless dimmer switch



RF Pilot with display & Keychain

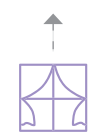


Detectors:

Smoke



Door/Window



Motion



Wi-Fi



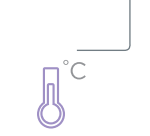
Smart RF Box Wi-Fi

Sensors:

Flood



Temperature

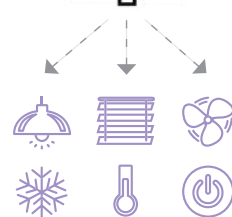


Twilight



Elements:

Switch unit - 6 outputs



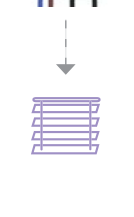
Switch unit - 1 output



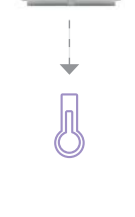
Switching socket



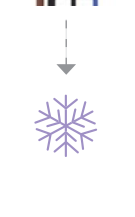
Switch unit for shutters



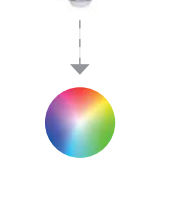
Thermostat for radiator



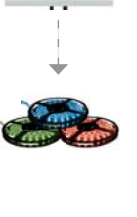
Switch unit - 1 output



RGB Coloured LED bulb

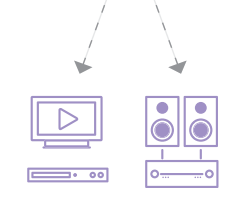


Dimmer for LED strips

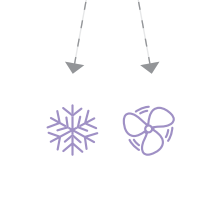


IR

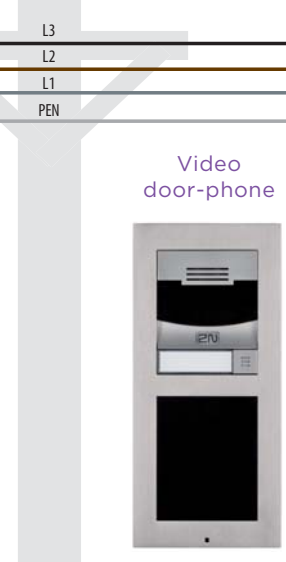
Audio /Video



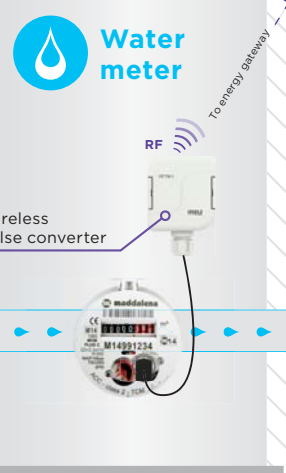
Home appliances



Air-conditioning

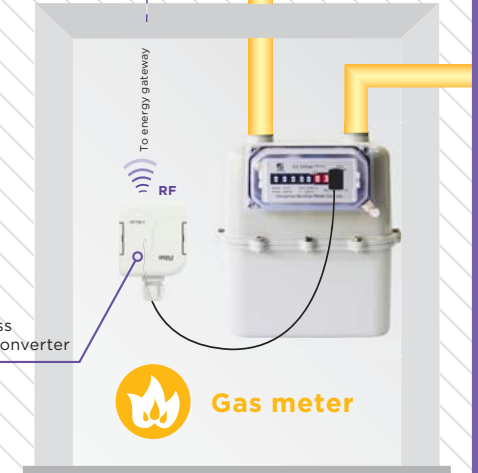


Video door-phone



Water meter

Wireless pulse converter



Gas meter

Wireless pulse converter



L3
L2
L1
PEN

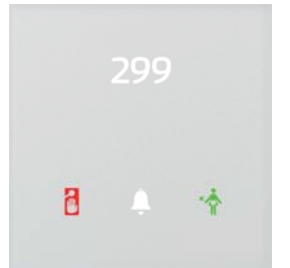
Wireless HRESK

Hotel Room Energy Saving Kit



Motion detector

- in conjunction with the main switch unit they can provide automatic lighting control
- as its battery powered it provides not only easy installation, but it can be located wherever it suits you



Multifunctional in front of controller

- the controller signals the information the guest chooses for Smart Card Holder - "Do not Disturb" or "Request for Cleaning"
- at the same time, it has a bell (button) that can be used by the hotel or maid service
- the design is possible in a glass design (black/white) or in the design of the LOGUS⁹⁰ switches



Door/window open detectors

- in combination with the main switch unit, they can provide efficient control of room thermoregulation
- battery power allows easy installation anywhere on the window or door frame



Fan-coil controller

- the unit can be combined with the temperature controller to achieve an effective solution for Fan Coil heating
- using the unit, you can change engine speed by three speeds and switch between heating/cooling mode



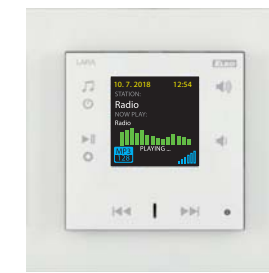
Thermoregulator

- the combination of the RFTC-150G digital thermoregulator and the RFSA-166M switching unit is used to control room temperature
- the controller can change the standard heating and cooling temperature and has three speeds - low, medium, high
- automatically checks the selected room temperature, and if it is too high, it switches on the air conditioning



4 buttons controller

- thanks to the flat base of the wireless switch, you can easily place it on the bedside table or stick it on the glass wall
- the RFWB-40/G wireless switch has MASTER OFF (channel number 3) - this button turns off all lights and the fan in the room
- By pressing the button down briefly or for longer, the lights can be turned on/off or the brightness can be adjusted.



Radio & Music player

- LARA is an Internet radio and also a player of your favourite music from a smartphone or central repository.
- installation is with the LOGUS⁹⁰ design switches
- allows you to listen to music in the room where it is installed



Smart card holder

- the card reader can be combined with the main switch unit to which additional units and detectors can be connected to provide automatic control of the lighting when the guest is in the room or the switch off if the card is removed
- you can use the "Do not Disturb", "Clean Room" or "Shut Down" buttons to provide efficient hotel services - this information is also signalled on the multifunctional controller beside/on front of the door

Saving for a hotel, convenience for customers

This is the automatic control of lighting, which is controlled by a combination of sensors (motion/door) and a switching component.

Operation is fully automatically or via a wireless controller, which is beyond the basic functions (ON/OFF). Additionally MASTER OFF function (one touch turns off all the lights).

Can control not only the main room lighting, but also a lamp in the corner of the room, curtains/blinds or can disable all/some of the socket circuits.

This combination of detector and the switching component provides hoteliers savings in lighting costs and customer ease of use.



**Mural
Wireless controller**

RFWB-40

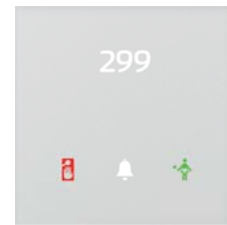
- the flat base of the controller is pre-disposed for fast installation on any surface
- sending the set command (ON/OFF, dimming, time off/on, retraction/extend) after pressing the button
- colour combinations of frames in the LOGUS⁹⁰ design
- stage setting - One-touch control lets you control multiple devices
- battery power 1x 3V CR 2032 battery



**Smart card
holder**

RFGCH-31W, RFGCH-31B

- the card holder can be combined with the main switch unit to which additional units and detectors can be attached to provide automatic lighting control when the guest is in the room or vice versa when the card is removed
- an effective "hotel room" or "all shut-down" buttons can be used to ensure efficient hotel services - this information is also signalled on the multifunction card reader beside/ on front of the room door
- design in glass design (black/white)

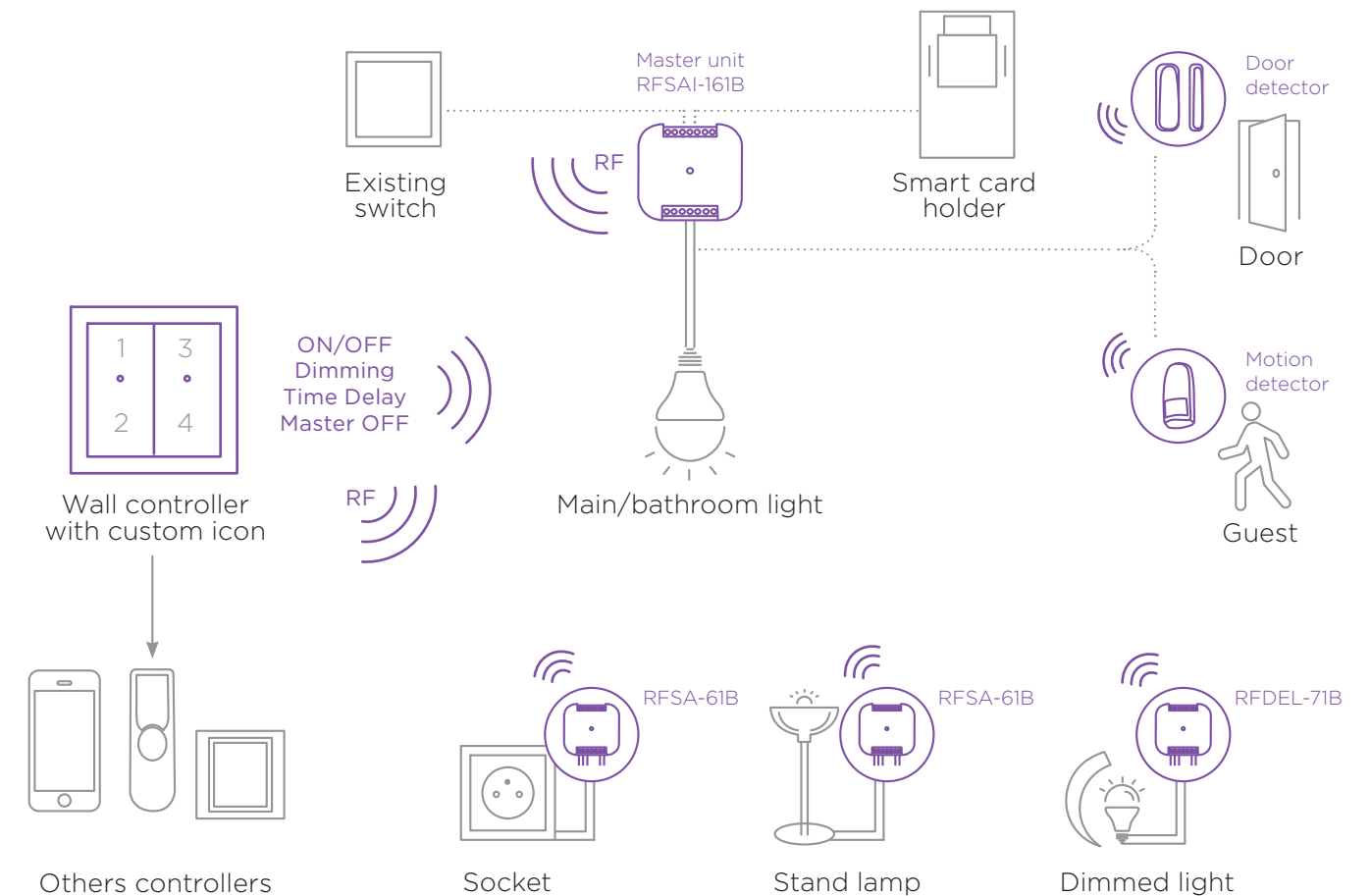


**Multifunctional
in front of controller**

RFGCR-31W, RFGCR-31B

- wall panel with integrated RFID card reader
- indicates the information that a guest chooses for Smart Card Holder - "Do not Disturb" or "Request for Cleaning"
- contains a bell (button) that can be used by the hotel or maid service
- the design is possible in glass design (black/white) or in the design of the LOGUS⁹⁰ switches

Automatic light control functionality



Control overheated rooms

Temperature control in accommodation facilities is very often underestimated, although hot/cold is one of the first sensations that we feel when entering a room.

The temperature is universal temperature is very complicated, therefore the possibility to change the temperature should be easy. A digital regulator in combination with a switching component for heating control allows quick and easy temperature control. It is also possible to complement the component for the protection against overheating/undercooling temperatures, in the event that no one is inside.

This combination of components is a useful tool that prevents energy waste, as well as damage to equipment in the room.



Wireless thermal component

RFSTI-111B

- temperature component with 1 output channel
- serves to protect the room against overcooling/overheating where the temperature can cause damage to furniture and appliances
- suitable especially for rooms with a tropical climate
- by means of an external sensor it measures the temperature in the range of 5–35 °C and switches the Fan coil or air conditioner based on the set temperature



Switch unit

RFSA-166M

- the 6-channel version of the switch unit allows switching between heating/cooling mode and 3 speeds
- can be used in combination with the RFTC-150G wireless controller, which measures the room temperature via the integrated sensor, and sends a command to switch the switching unit on/off to achieve better functionality
- the unit can be paired with wireless detectors that can more efficiently switch heating/cooling (when a window is open, etc.)
- permanent power supply 110–230V AC or 12–24V AC / DC

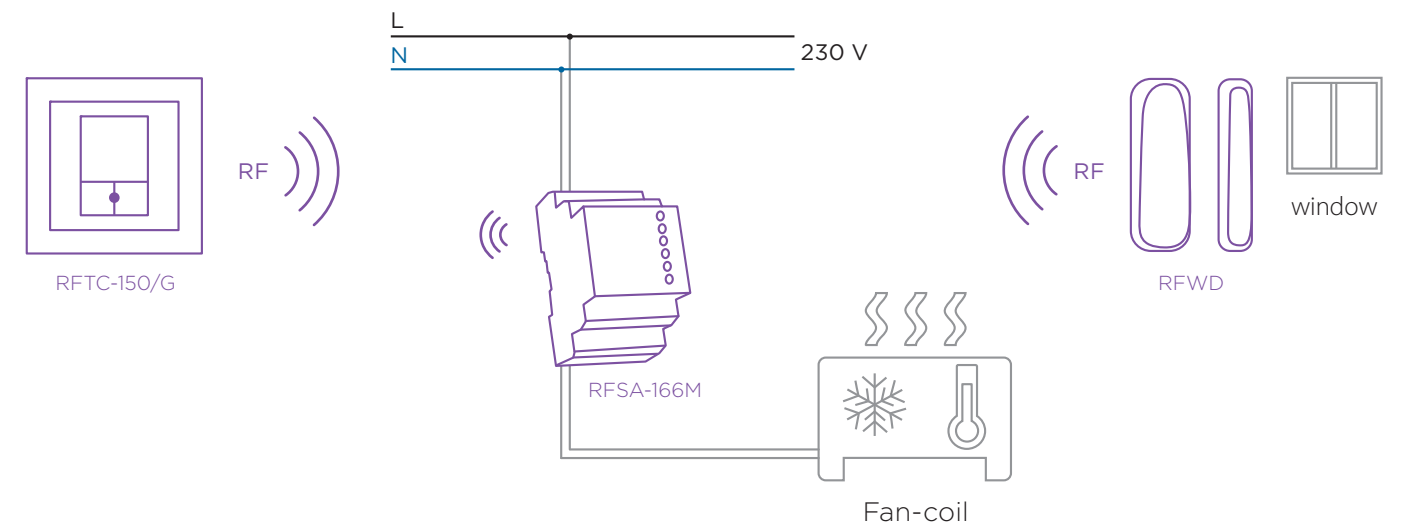


Temperature controller

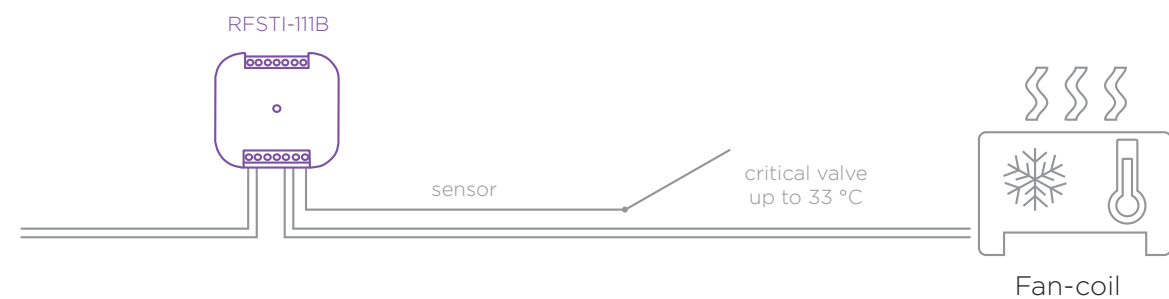
RFTC-150/G

- the temperature controller can be combined with the RFSA-166M switching unit which commands the switching unit on/off
- colour combinations of frames in the LOGUS⁹⁰ design
- temperature range is 0... 55 °C
- battery power 2x 1.5 V AAA battery

Temperature control



Overheating protection of room




























Apps for all

Applications that you can download completely free, with which you can control all devices connected to the system.

On your device, you can view power consumption values and charts, check security cameras, or control your home audio. At the same time, you can configure all your devices through the application.

The application is designed for smart phones and watches running Android or iOS from Apple.

Overview of functions

	  iHC-MIRF 	  iHC-MARF 	  iNELS Home Control 	  iNELS Home Control 
 Lighting control	✓	✓	✓	✓
 Blinds/Shutters	✓	✓	✓	✓
 Sockets	✓	✓	✓	✓
 Garage doors/gates	✓	✓	✓	✓
 RGB bulbs, LED strips	✓	✓	✓	✓
 Scenes	✓	✓	✓	✓
 Heating	✓	✓	✗	✗
 Cameras	✓	✓	✓	✗
 Air conditioning	✓	✓	✗	✗
 Weather station	✓	✓	✗	✗
 Energy control	✗	✓	✗	✗
 Video door-phone	✓	✓	✗	✗
 Audio/Video	✓	✓	✗	✗



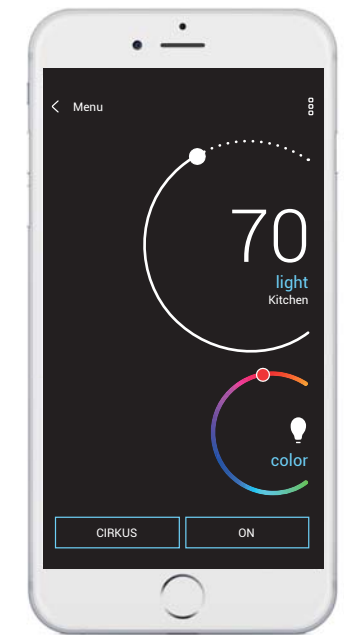
Overview

Absolute control over all appliances.



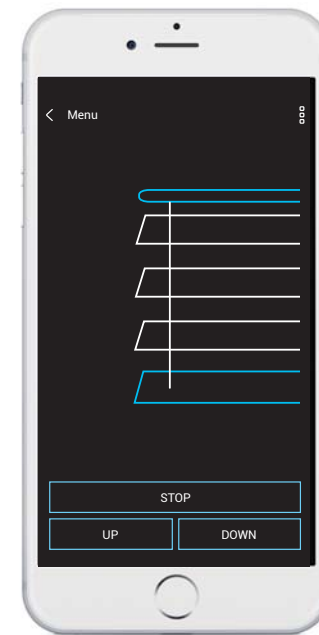
Thermo

You can set the temperature in each room just the way you like.



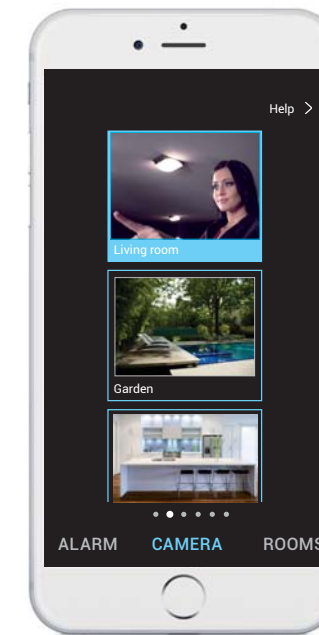
Lighting control

Dim up/down set romantic light scenes with RGB.



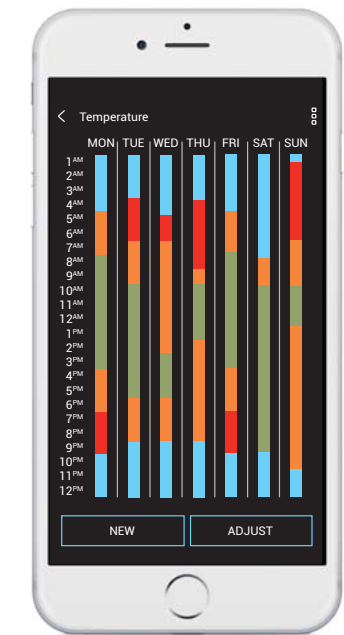
Blinds control

Did you forget to set the shutters in light of the weather? No problem.



Cameras

You can keep an eye on the security of your home from anywhere on earth.



Scheduling

When and what mode of heating in one place for a week-arranged and easier.

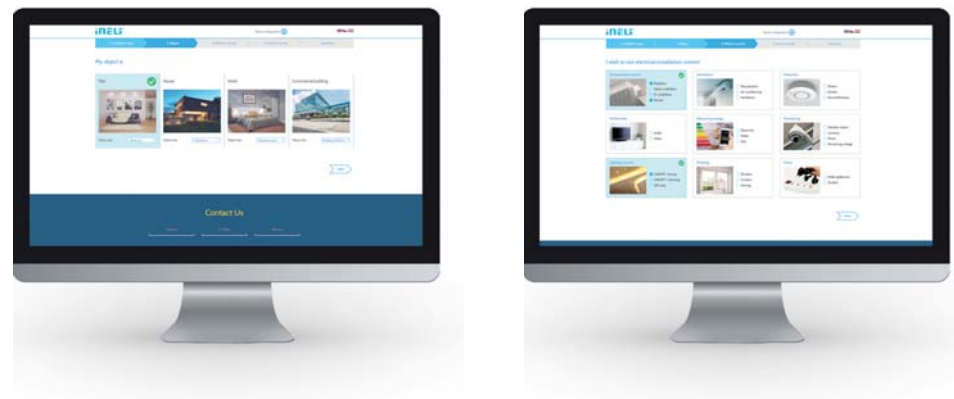
References iNELS

Since we began supplying iNELS, we have performed over 5,000 installations. Introducing a selection.

A fully remote-controlled squash center in Hungary, a French restaurant in Prague's Municipal House, a discotheque in Kiev, Ukraine, a summer residence on Mallorca and a myriad, of apartments and houses. You can find our systems installed and implemented in hundreds of locations across the globe.

We can introduce the iNELS system to various projects, whether it concerns the residential sector or commercial space.

Quote can be found at:
elkoep.inels.com



Smart Home & Building Solutions for



www.inels.com



Hotel Kempinski Bayterek

Almaty/Kazakhstan

- 5 star hotel
- lighting control in the public space
- more than 15 000 lights jare controlled via DALI protocol
- lights scenes



Jamie's Italian Restaurant

Budapest/Hungary

- iNELS BUS System is controlling lighting and terrace-cooling/heating
- high voltage neon signs, lighting control



Badorka Balaton Aquarium

Balatonfured/Hungary

- iNELS controls all the lighting, for example the illumination of the aquariums
- speciality: there are no switches on the walls at all. Every light can be controlled via the 2 mounted tablets



Pest-Buda Bistro & Hotel

Budapest/Hungary

- The oldest hotel of Hungary, which was built in 1696
- 10 rooms with unique luxury equipment with heating & air-condition
- Furniture & equipment has been renovated a few years ago



Vila

Beskydy/Polsko

- iNELS bus system
- meteostation
- lighting scenes
- using by tablet, smart phones and EST3



Hotel Wyndham

Istanbul/Turkey

- more than 3000 lighting circuits are controlled through the DALI protocol
- another thousand lighting circuits are controlled via DA3-22M units

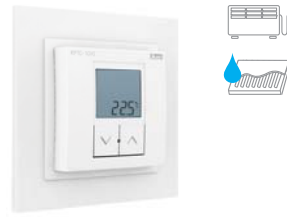
Thermo regulation



Wireless touch unit

RF Touch

- power: 100–230 V AC, from the side 12 V DC
- load: up to 40 units
- Wi-Fi connection
- output: 2x potential free relays (3 A)



Temperature controller

RFTC-10/G

- power: 2x 1,5 V AAA battery
- temperature range: 0 to +55°C (32–131°F)
- integrated sensor
- design LOGUS⁹⁰ (glass, metal, wood, stone)



Temperature controller

RFTC-50/G

- power: 2x 1,5 V AAA battery
- temperature range: 0 to +55°C (32–131°F)
- weekly programming
- integrated sensor
- design LOGUS⁹⁰ (glass, metal, wood, stone)



Temperature controller

RFTC-100G

- power: 100–230 V AC/50–60 Hz
- temperature range: 0 to +55°C (32–131°F)
- weekly programming
- integrated sensor
- design LOGUS⁹⁰ (glass, metal, wood, stone)



Switch unit with sensor

RFSTI-11/G

- power: 110–230 V AC/50–60 Hz
- temperature range: -20 to +50°C (-40–122°F)
- load: 8 A
- internal/external sensor
- design LOGUS⁹⁰
- LED status indication



Thermovalve

RFATV-1

- power: 2x 1,5 V batteries AA
- temperature range: 0 to 32°C (32–90°F)
- integrated sensor
- adapters: RAV, RA, RAVL



Temperature sensor

RFTI-10B

- power: 1x 3 V CR 2477 battery
- temperature range: -20 to +50°C (-40–122°F)
- internal/external sensor



Switch unit with sensor

RFSTI-11B

- power: 230 V AC/50–60 Hz, 120 V AC/60 Hz, 12–24 V DC
- temperature range: -20 to +50°C (-40–122°F)
- load: 16 A

Detectors



Smoke detector

RFSD-101

- power: 4x 1,5 V AAA battery
- smoke detection: optical light scattering
- autotest



Motion detector

RFMD-100

- power: 2x 1,5 V AA battery
- detection angle 120°
- shot length 12 m (13.12 yd)



Window detector

RFWD-100

- power: 1x 3 V CR2032 battery
- opened window/door detection
- battery status indication



Flood detector

RFSF-1B + FP-1

- power: 1x 3 V battery CR 2477
- terminal for external probe FP-1
- operation button: battery status, signal quality



IP camera

iNELS Cam

- power: 5 V DC adapter
- resolution: 640 x 480 px
- night light
- up to 10 cameras in app



Video Cameras

- you can connect any video camera supporting MJPEG2
- compatible cameras Axis, D-link, Dahua

Energy management



Energy gateway

RFPM-2M

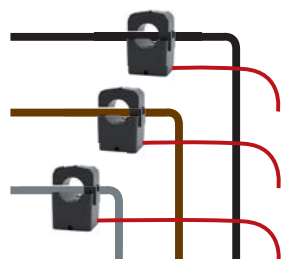
- power: 230 V AC / 50–60Hz
- inputs: PULS1, PULS2, BUS
- tariff inputs: TARF1, TARF2
- current measurement probes 3 x CT50
- output RELAY: 1NO/NC, 16A
- connection: LAN / Wi-Fi



Pulse converter

RFTM-1

- power: 2x 1,5 V battery AAA
- supported sensors: LS (LED sensor), MS (magnetic sensor), IRS (Infra Red sensor)
- IP 65 protection



Current transformer

CT50

- the opening CT are installed on the existing wire of the measured circuit, most frequently at the main input to the electricity meter
- current: 50 A
- frequency: 50/60 Hz
- dimensions: 31 x 46 x 32 mm (1.22 x 1.81 x 1.26 in)



Flashing LED

LED sensor

LS

- the LED sensor scans LED pulses on meters, which indicate consumption by flashing
- cable length: 1.5 m (4.92 ft)



Built-in magnet in the gas meter

Magnetic sensor

MS

- the magnetic sensor scans the pulse, created with every rotation of a magnet located on the unit dial
- cable length: 1.5 m (4.92 ft)



Rotating water meter indicator

Infra Red sensor

IRS

- the Infra Red sensor scans the reflective curtain placed on the moving dial (mainly on water meters)
- cable length: 1.5 m (4.92 ft)



Dimming actuators



Wireless colored bulb
RF-RGB-LED-550

- power: 100–240 V AC 50/60 Hz
- luminous flux: 550 lm
- color temperature: RGB
- brightness regulation: 0–100%
- compatible base: E27
- durability: 30 000 h.



Wireless white bulb
RF-White-LED-675

- power: 100–240 V AC 50/60 Hz
- luminous flux: 675 lm
- color temperature: 600/5000K
- brightness regulation: 0–100%
- compatible base: E27
- durability: 30 000 h.



Dimming socket
RFDSC-71

- power: 230–250 V/50–60 Hz (300 VA), 120 V AC/60 Hz (150 VA)
- type of load: R, L, C, LED, ESL
- light scenes functions
- minimum brightness setting
- operated from 32 channels



Dimmer for (RGB) LED strips
RFDA-73M/RGB

- power: 12–24 V DC stabilized
- load: 3x 5 A
- LED strips:
 - single color 7,2 VA, 3x 8 m (3x 26.25 ft)
 - RGB LED 14,2 VA, 10 m (32.80 ft)
- external control 0–10 V



Universal dimmer
RFDEL-71M

- power (Load): 230 V AC/50 Hz (600 VA), 120 V AC/60 Hz (300 VA)
- type of load: R, L, C, LED, ESL
- external control 0–10 V or potentiometer
- control from external button
- light scenes function
- minimum brightness setting
- operated from 32 channels



Universal dimmer
RFDEL-71B

- power (Load): 230 V AC/50 Hz (160 VA), 120 V AC/60 Hz (80 VA)
- type of load: R, L, C, LED, ESL
- control from external button
- light scenes function
- minimum brightness setting
- overheat protection
- operated from 25 channels



Twilight switch
RFSOU-1

- power: 2x 1,5 battery AAA
- range: 1–100 000 lx
- twilight and light switch function
- time delayed setting (0–2 min.)
- IP65 protection

Switching actuators



Switching socket
RFSC-61

- power: 230–250 V/50–60 Hz, 120 V AC/60 Hz
- load: 16 A
- time-functions (2 s.–60 min.)
- operated from 32 channels (of controllers)



Switch unit
RFS-61M

- power: 110–230 V AC/50–60 Hz, 12–24 V DC
- load: 16 A
- time-functions (2 s.–60 min.)
- operated from 25 channels (of controllers)
- option of connecting an external antenna



Switch unit - 6 outputs
RFS-66M

- power: 110–230 V AC/50–60 Hz
- load: 6x 8 A
- 6 independent channels
- time-functions (2 s.–60 min.)
- operated from 25 channels (of controllers)
- option of connecting an external antenna



Outdoor switch unit
RFUS-61

- power: 230 V AC/50–60 Hz, 120 V AC/60 Hz, 12–24 V DC
- load: 12 A
- time-functions (2 s.–60 min.)
- operated from 25 channels (of controllers)
- IP65 protection



Switch unit
RFS-11B
RFS-61B

- power: 230 V AC/50–60 Hz, 120 V AC/60 Hz, 24 V DC
- load: 16 A
- single-function ON/OFF or multifunctional design
- operated from 25 channels (of controllers)
- manual control with inbuilt button



Switch unit
RFS-61B

- power: 230 V AC/50–60 Hz, 120 V AC/60 Hz, 24 V DC
- load: 16 A
- time-functions (2 s.–60 min.)
- operated from 25 channels (of controllers)
- terminal for control from existing button



Switch unit - 2 outputs
RFS-62B

- power: 230 V AC/50–60 Hz, 120 V AC/60 Hz, 24 V DC
- load: 2x 8 A
- 2 independent channels
- time-functions (2 s.–60 min.)
- each channel can be controlled by up to 12 controllers



Shutter unit

- RFJA-12B/230V (120V)
- RFJA-12B/24VDC
- RFJA-32B/230V (120V)
- RFJA-32B/24V
- power: 230 V AC/50–60 Hz, 120 V AC/60 Hz, 12–24 V DC
- load: 2x 8 A
- operated from 25 channels (of controllers)

Controllers



Wall buttons
RFWB-20/G, RFWB-40/G

- power: 3 V CR 2032 battery
- 2 channels /4 channels
- scenes function
- command LED indication
- switching with a micro-button



RF Touch
Wall (surface), Flush

- power: 100–230 V AC, from the side 12 V DC
- setting with up to 40 units + 30 detectors
- central unit with autocontrol
- status visualization
- colored TFT LCD display, 3.5"



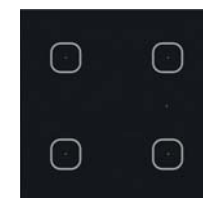
Wireless remote controller
RF Pilot

- power: 2x 1,5 V AAA batteries
- setting with up to 40 units
- inbuilt temperature sensor
- scene function
- status visualization
- color OLED display



4 buttons controller
RF Key

- power: 3 V CR 2032 battery
- scenes function
- command LED indication



Wireless Dimmer Switch
RFDW-71

- wireless switch in glass design with integrated dimming element
- supply voltage: 230V AC/50 Hz, 120V AC/60 Hz
- 4-channel design
- control up to 25 channels
- 6 light functions



Contact converter
RFSG-1M

- cheap/expensive current control
- power: 110–230 V AC/50–60 Hz, 24 V DC (galvanically separated)
- control input 12–230 V AC/DC
- option of connecting an external antenna



Contact converter
RFIM-20B, RFIM-40B

- wireless contact converter changes your existing button to a wireless one
- power: 1x 3 V battery CR 2477
2x 3 V battery CR 2032
- 2 channels/4 channels

Behind the scenes



Smart RF Box

eLAN-RF-003

- power: 10–27 V DC/200 mA SELV
- setting with up to 40 units
- LAN connection
- automatic DHCP connection
- managing accounts/backup of projects via web interface



Smart Wi-Fi RF Box

eLAN-RF-Wi-003

- power: 10–27 V DC/200 mA SELV
- setting with up to 40 units
- LAN or Wi-Fi connection
- HUB does not need the Internet to run
- automatic DHCP connection
- managing accounts/backup of projects via web interface



Repeater

RFRP-20

- power: 230–250 V/50–60 Hz, 120 V AC/60 Hz
- the socket function is retained



GSM communicator

RFGSM-220M

- power: 11–30 V DC, backup power supply Li-Ion batteries
- inputs: 4 wire, 10 wireless RF
- outputs: 2 relay (2x 8 A), 10 wireless (RFS...)
- control via SMS or ringing
- control of up to 30 telephone numbers
- other functions: time delay, alarm, status report

Door communicator



Door communicator

2N HELIOS BASE

- door communicator 2N Helios door entry system with camera for smaller installations with a built-in camera and one or two buttons
- you can choose from two variants of contactless RFID reader



Door communicator

2N HELIOS VERSO

- basic module series offers higher specification camera with IR illumination and night vision
- watchtower with multifunction modules can be changed according to customer needs
- you can choose mechanical illuminated keys, a numeric keypad or infopanel

Accessories



Thermodrive

Telva 230 V, Telva 24 V

- operating voltage: 230 V or 24 V AC, 50/60 Hz
- stopping force: 100 N ±5%
- dimension h/w/l: 55+5 x 44 x 61 mm (2.17+0.2 x 1.73 x 2.40 in)



Flood Probe

FP-1

- working temperature: -10–40°C (14–104°F)
- mounting: glue / screw
- length of cable: 3 m (3,3 yd)
- dimensions: 60 x 30 x 8 mm (2,4 x 1,2 x 0,3 in)



Temperature sensors

TC

- range: 0–70 °C (32–158°F)
- sensor: NTC 12 K 5 %
- TC-0 - l. 110 mm (4.33 in)
- TC-3 - l. 3 m (1.42 yd)
- TC-6 - l. 6 m (1.75 yd)
- TC-12 - l. 12 m (13.12 yd)



Temperature sensors

TZ

- range: -40–125 °C (-40–257°F)
- sensor: NTC 12 K 5 %
- TZ-0 - l. 110 mm (4.33 in)
- TZ-3 - l. 3 m (1.42 yd)
- TZ-6 - l. 6 m (1.75 yd)
- TZ-12 - l. 12 m (13.12 yd)



Internal antenna

AN-I

- for GSM-220M, eLAN-RF-003, eLAN-RF-Wi-003, RFDA-73/RGB, RFSA-61M, RFSA-66M, EMDC-64M, RFDEL-71M and transmitter module RFSG-1M into plastic switchboard
- rod angle, without cable
- sensitivity 1dB



External antenna

AN-E

- for RFGSM-220M, eLAN-RF-003, eLAN-RF-Wi-003, RFDA-73/RGB, RFSA-61M, RFSA-66M, EMDC-64M, RFDEL-71M and transmitter module RFSG-1M
- cable length 3 m (3.28 yd)
- sensitivity 5dB

Protocol and compatibility

The communication between the components is wireless at 868–916 MHz (according to country standards/regulations), using the unique RFIO and RFIO² protocols. Both are proprietary wireless protocols from ELKO EP, which have a completely unique structure. RFIO² is an extension of the RFIO protocol and allows users to use newly introduced features, such as unit signals (repeater), for selected features. This protocol is fully compatible with the previous version of the protocol (RFIO).

Available frequency for individual territories:

866 MHz India

868 MHz EU, Ukraine, Russia, Middle East

916 MHz South and North America, Australia,

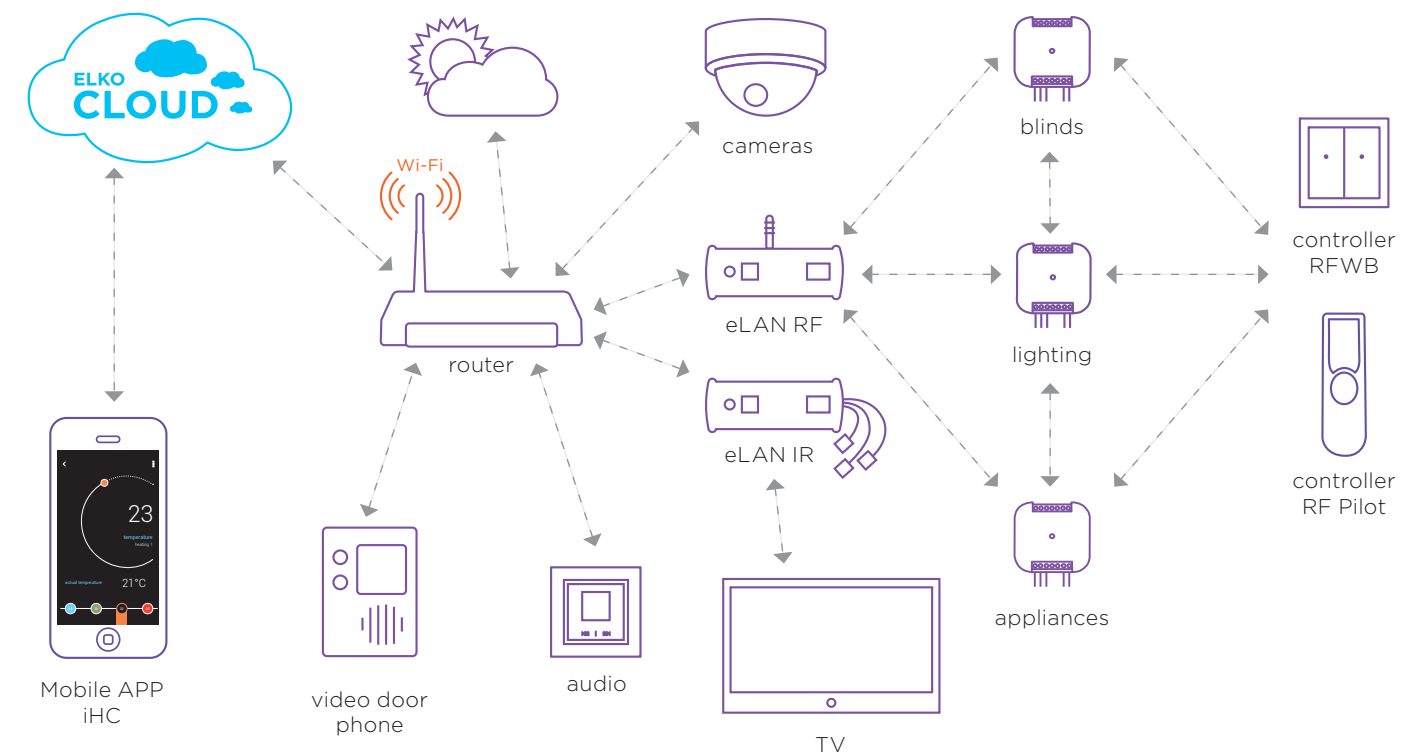
New Zealand

Benefits of RFIO:

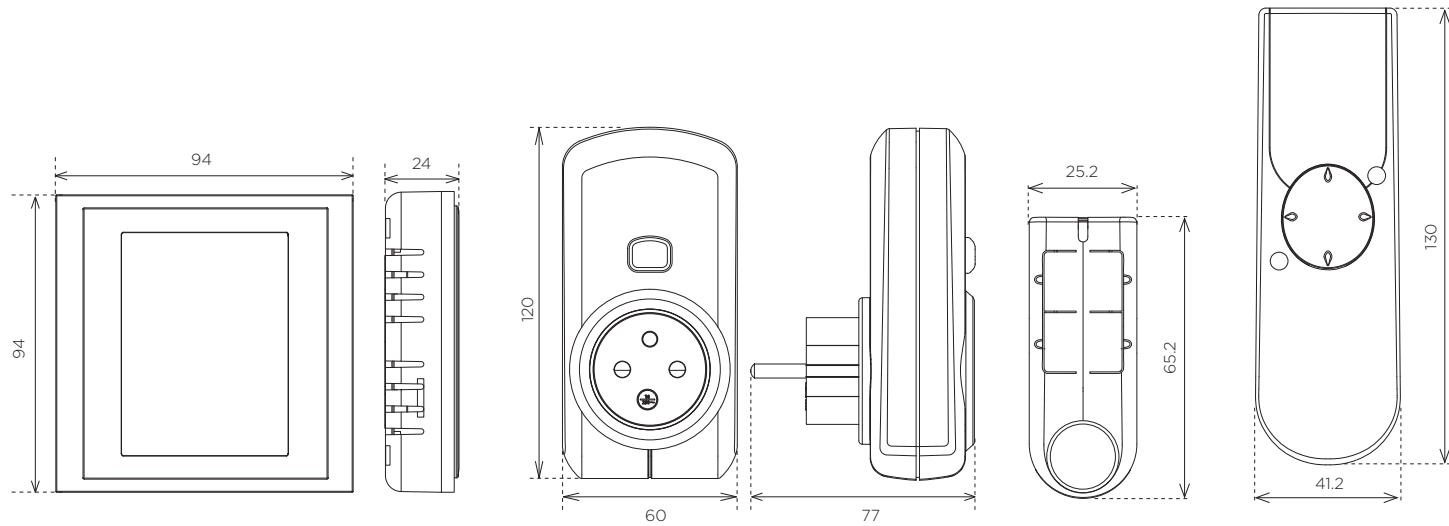
- communication is low-energy and reliably transfers small data packets.
- fees or licenses are not required
- no overlapping of communication space with unaddressed commands.
- frequency used does not interfere with Wi-Fi/Bluetooth devices.
- setting communication between components is not conditional on working with a computer or system.

Benefits of RFIO²:

- products labeled as "RFIO²" will allow newly set selected components such as unit signals (repeaters).
- for components, you can easily update FW using the RFAF/USB service device.
- enables communication with RFMD-100, RFWD-100 and RFSD-100/RFSD-101
- data transfer between wireless components takes place in such a way that other receivers within range can help transfer the information (packet) to a remote receiver that is out of reach. It is possible to cover large-scale objects (real estate) and also increase the reliability of transmission in more demanding buildings.
- Backward compatibility with RFIO elements is retained.



Product dimensions

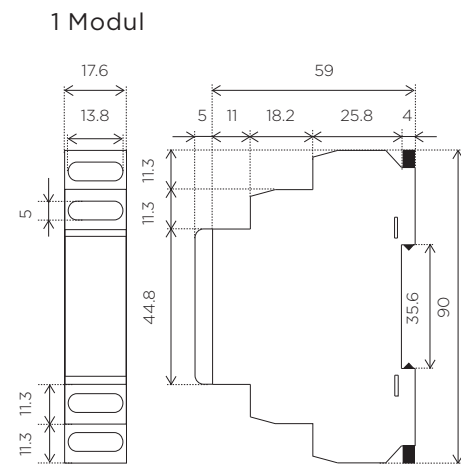


RF Touch - W

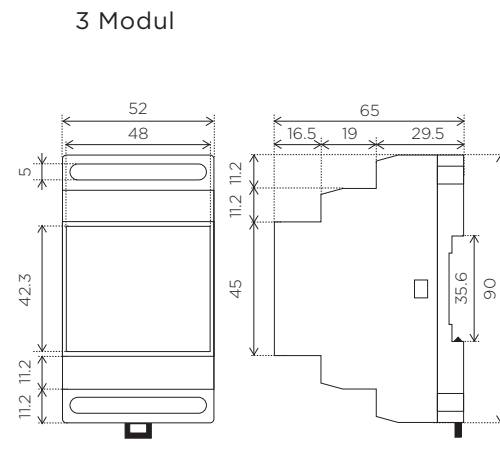
RFRP-20
RFDSC-71
RFSC-61

RF Key

RF Pilot

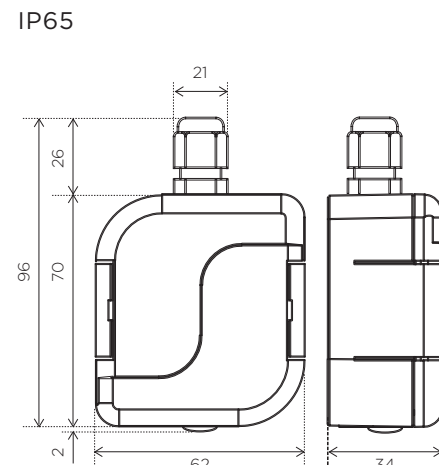


RFSAs-61M

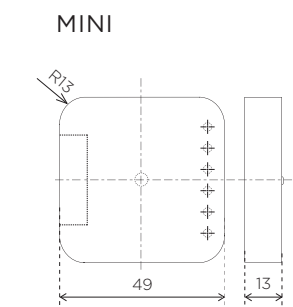


RFSAs-66M
RFDEL-71M

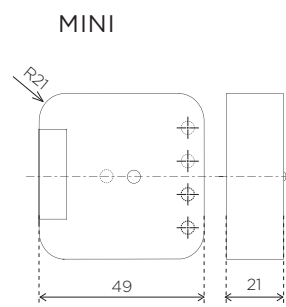
RFDA-73M/RGB
RFPM-2



RFSOU-1

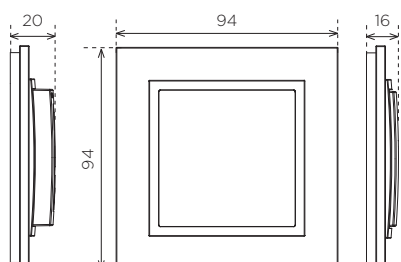


RFTI-10B
RFSF-1B



RFDEI-71B
RFSAs-62B

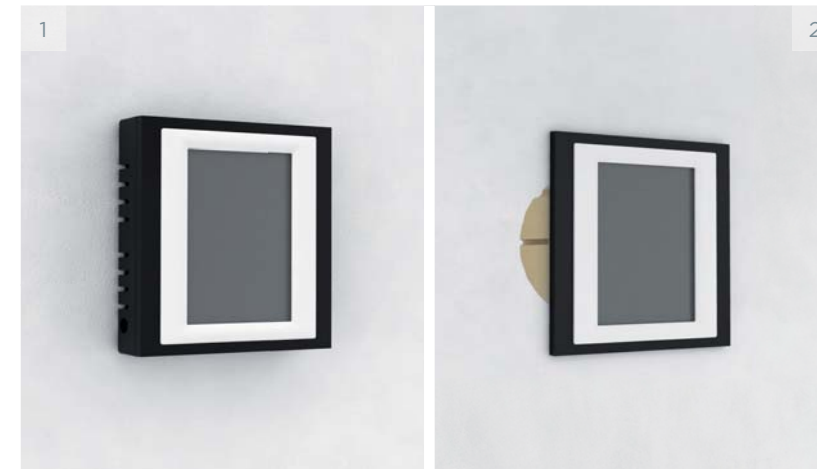
RFJAs-12B-230V



RFTCs-50/G

RFWB-20/G
RFWB-40/G

Installation possibilities



1) Surface mounted

Wall mounted or in an installation box with spacing of 65 mm.

RFSC-100, RFWB-40/G
RFMD-100, RFTC-50/G
RFWD-100, RF Touch
RFWB-20/G

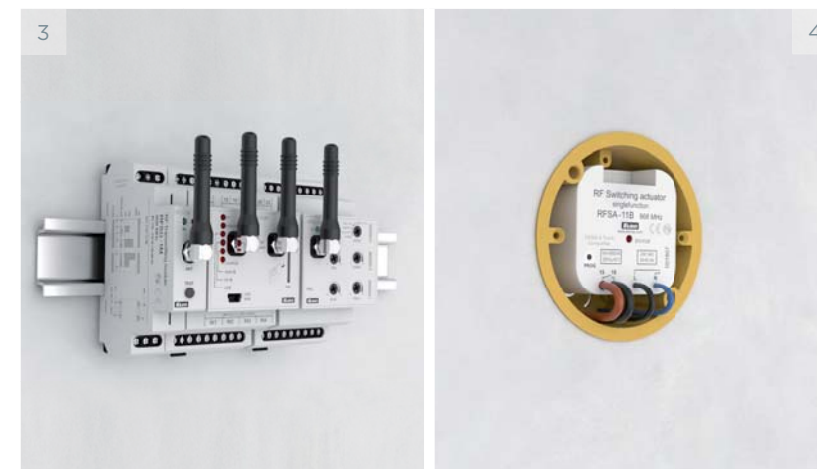
2) Flush mounted

RF Touch

3) DIN Rail mounted

On DIN rail according to EN 615.

RFPM-2, RFSAs-61M
RFDA-73M/RGB, RFSAs-66M
RFDEL-71M, RFSAs-61M



4) Mounted to or in the installation box

In an installation box or built in to the device.

RFTI-10B, RFSAs-62B
RFSF-1B + FP-1, RFSAs-61B
RFDEL-71B, RFJAs-12B/230V



5) Mounted into the cover of appliance

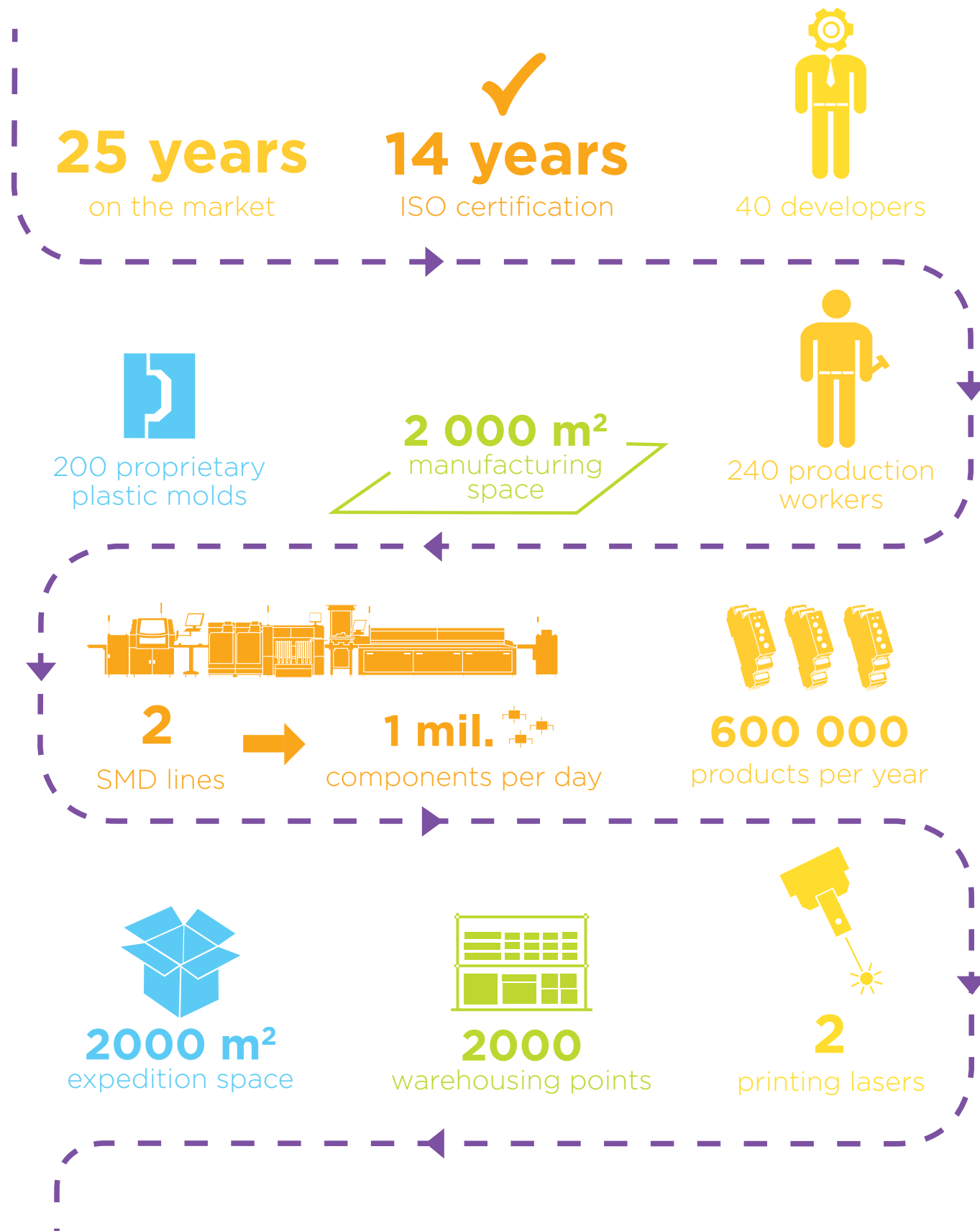
RFTI-10B, RFSAs-62B
RFSF-1B + FP-1, RFSAs-61B
RFDEL-71B, RFJAs-12B/230V

6) Surface mounted

SOU-1, RFUS-61

Others just resell

HOWEVER, WE DEVELOP AND MANUFACTURE PRODUCTS OURSELVES!



R&D overall view



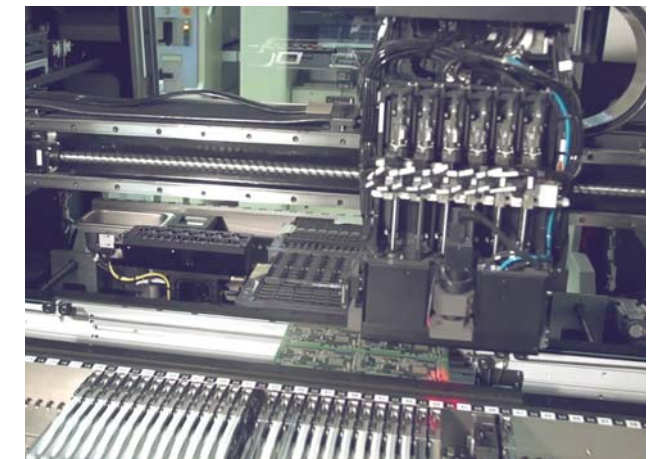
Internal lab



SMD production line



Chip placing



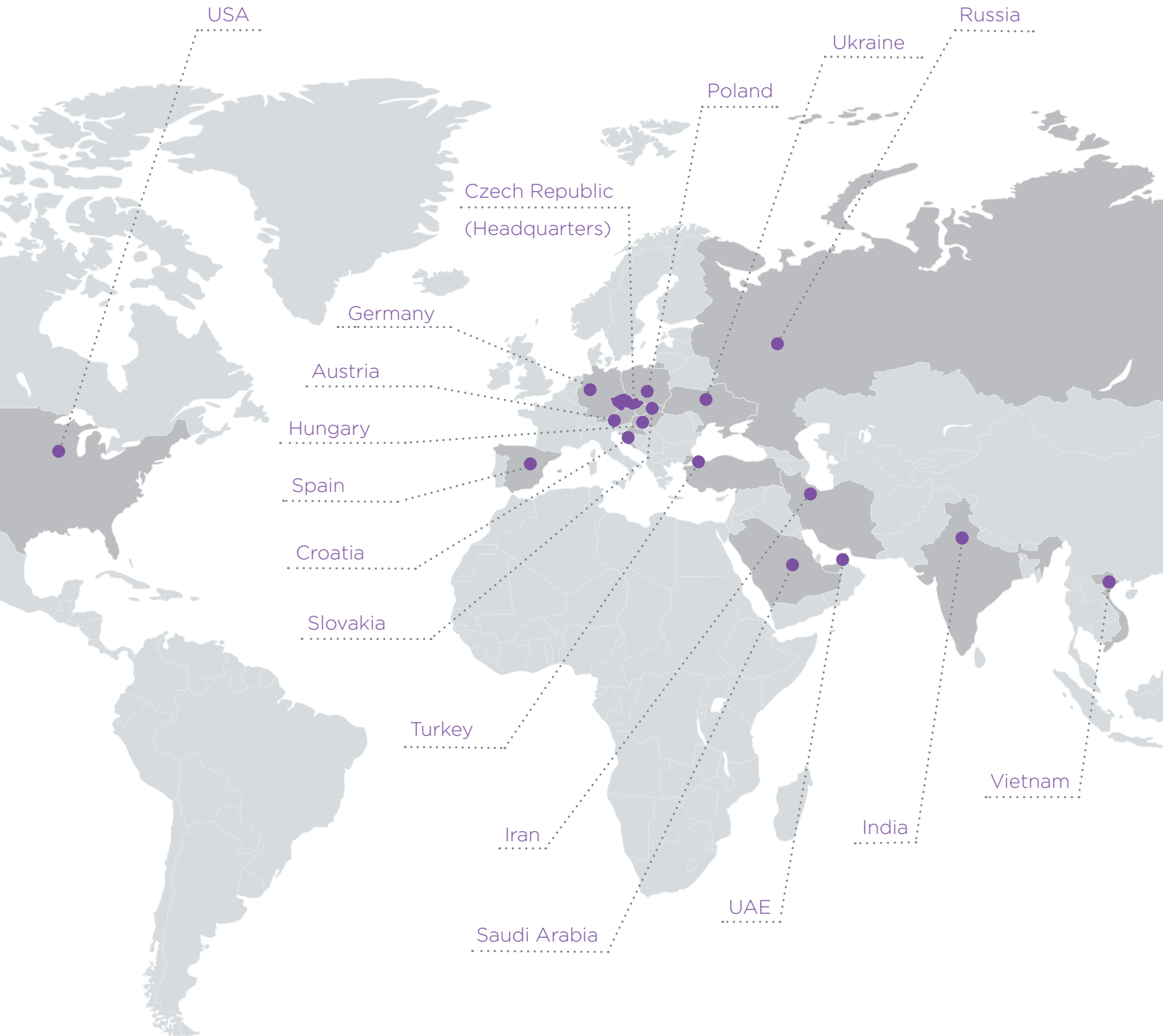
Production hall



Testing



ELKO EP Holding



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